

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
  
2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Brent E. Vecchia on 9/2/08.
  
3. Claims 1, 9, 16, and 26 have been amended as follows:
  1. (Currently Amended) A method comprising:  
  
transforming a signal from a time domain to a transform domain with a partial wavelet transform;  
  
adapting a first adaptive filter in the transform domain based on the transformed signal;  
  
estimating a delay of an impulse response based on the adaptation of the first filter;  
  
delaying a signal based on the estimated delay; and  
  
adapting a second adaptive filter in the time domain based on the delayed signal.

9. (Currently Amended) An article comprising:

a storage medium comprising at least one of a floppy diskette, an optical disk, a CD-ROM, a magneto-optical disk, a ROM, a RAM, an EPROM, an EEPROM, a magnet card, an optical card, and a Flash memory, the storage medium having stored thereon data representing sequences of instructions that if executed cause an apparatus to:

transform a signal from a time domain to a transform domain with a partial wavelet transform;

adapt a first adaptive filter in the transform domain based on the transformed signal;

estimate a delay of an impulse response based on the adaptation of the first filter;

adapt a second adaptive filter in the time domain based on a signal that has been delayed based on the estimated delay.

16. (Currently Amended) An apparatus comprising:

a signal transformer to transform a signal in a time domain to a transformed signal in a transform domain with a partial transform;

a first adaptive filter in communication with the signal transformer, the first adaptive filter to adapt based on the transformed signal in the transform domain;

a delay estimator in communication with the first adaptive filter, the delay estimator to estimate a delay associated with an impulse response based on the adaptation of the first adaptive filter;

a delayer in communication with the delay estimator, the delayer to delay a signal in the time domain based on the estimate of the delay; and

a second adaptive filter in communication with the delayer, the second adaptive filter to adapt in the time domain based on the delayed signal.

26. (Currently Amended) An apparatus comprising:

a DRAM memory; and

an echo canceller, the echo canceller including:

a signal transformer to transform a signal in a time domain to a transformed signal in a transform domain;

a first adaptive filter in communication with the signal transformer, the first adaptive filter to adapt based on the transformed signal in the transform domain, wherein the first adaptive filter has less coefficients than a number of coefficients corresponding to a full transform of the signal by the signal transformer;

a delay estimator in communication with the first adaptive filter, the delay estimator to estimate a delay associated with an impulse response based on the adaptation of the first adaptive filter;

a delayer in communication with the delay estimator, the delayer to delay a signal in the time domain based on the estimate of the delay; and

a second adaptive filter in communication with the delayer, the second adaptive filter to adapt in the time domain based on the delayed signal.